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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------------|------------------|
| 10/519,215 | 09/19/2005 | Rainer Steiner | I431.122.101/FIN 399 PCT/ | 7311 |

25281 7590 03/29/2007
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MINNEAPOLIS, MN 55402

EXAMINER

NASRI, JAVAH H

ART UNIT PAPER NUMBER

2839

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 03/29/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/519,215

Applicant(s)

STEINER ET AL.

Examiner

Javaid Nasri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-60 is/are pending in the application.
- 4a) Of the above claim(s) 32-44, 46-48, 50, 52 and 55-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31, 45, 49, 51, 53 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/49/2005, 12/22/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of election of article claims 31-54 and specie I (figure 1) in the reply filed on 2/15/2007 is acknowledged. Claims 55-60 are withdrawn from further consideration. Claims 32-37, 46-48 and 50 are also withdrawn from further consideration because they read on non-elected specie II, figure 2 (multichip module). Claims 38-44 and 52 are also withdrawn from further consideration because they read on non-elected specie III, figure 3 (having a hollow housing package).

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

- a) In the declaration the date of U. S. National Stage should be September 19, 2005, instead of December 22, 2004.

Specification

3. The disclosure is objected to because of the following informalities:

- a) On page 12, line 29, change "contact area 17" to -- contact area 14 --.

Note: These are few examples only. Applicant is required to check the entire disclosure and correct the disclosure accordingly.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 31, 45, 49 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami (5,874,700, cited in IDS).

Murakami discloses, **for claim 31**, a housing package comprising a plurality of layers of plastic (see figures 2A and 2B); at least one buried interconnect layer (see figures 2A and 2B); and at least one semiconductor chip (105), which has pointed-conical external contacts (106, 107) distributed on an outer side, the pointed-conical external contacts penetrating through one of the layers of plastic in the housing package and forming contact vias to the buried interconnect layer (see figure 2B), **for claim 45**, a number of layers of plastic (see figures 2A and 2B); at least one buried interconnect layer (see figures 2A and 2B); one semiconductor chip (105) with pointed-conical external contacts distributed on an outer side (106, 107), and the pointed-conical external contacts in the panel penetrating through one of the layers of plastic and forming contact vias to the buried interconnect layer (see figure 2B), **for claim 49**, the panel has external contact areas (108) in each component position on the underside and/or the upper side, **for claim 51**, the panel

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has passive components on its upper side, the components being connected by means of contact vias in the uppermost layer of plastic to one of the buried interconnect layers.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami in view of Bauer et al (6,455,442).

Murakami discloses all the limitations of claim 45, as shown above,

However, Murakami does not disclose:

- a) For claim 53, the panel has at least one layer of plastic of a pre-crosslinked plastic. Bauer et al discloses the panel has at least one layer of plastic of a pre-crosslinked plastic (see col. 2, lines 29-31), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Murakami, the panel having at least one layer of plastic of a pre-crosslinked plastic in view of Bauer et al for sturdiness.

8. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami in view of Rohloff (3,691,289).

Murakami discloses all the limitations of claim 45, as shown above,

However, Murakami does not disclose:

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- a) For claim 54, the panel has at least one layer of plastic with glass fiber reinforcements. Rohloff discloses the panel has at least one layer of plastic with glass fiber reinforcements (see col. 4, lines 33-39), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Murakami, the panel has at least one layer of plastic with glass fiber reinforcements in view of Rohloff for sturdiness.

Contact

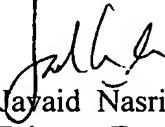
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jayaid Nasri
Primary Examiner
Art Unit 2839

JN

Jhn

March 22, 2007